DOCUMENT RESUME

ED 342 756 SP 033 641

AUTHOR Talbert, Joan E.; McLaughlin, Milbrey Wallin
TITLE Understanding Teaching in Context.
INSTITUTION Center for Research on the Context of Secondary School Teaching.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO CRC-P92-142
PUB DATE Mar 92
NOTE 37p.
PUB TYPE Information Analyses (070) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Context Effect; High Schools; Literature Reviews; *Quality of Working Life; *Secondary School Teachers; Teacher Attitudes; Teacher Effectiveness; Teacher Improvement; *Teacher Response; Teacher Student Relationship; *Teaching Conditions

ABSTRACT

This study, begun in October 1987, was conducted to explore the effect of particular contexts of schooling on educational outcomes and to provide a comprehensive look at what and how context conditions affect teaching and learning. The study design integrates 3 years of field research in 16 public and private high schools in 2 states and analyses of national survey data from the High School and Beyond and the National Education Longitudinal Study 1988 programs. The research focuses on the bottom-up teacher's-eye perspective within embedded contexts rather than the outside-in view of researchers and policymakers usual in the context-effects research traditions. Teachers' perspectives consider teaching as an integrating activity, intertwined with students, subject matter, instruction, dynamics of the school setting, and features of the immediate workplace environment. Results indicate ways of informing educators, administrators, and policymakers with respect to improving the conditions and quality of teaching, and they suggest principles and strategies for redesigning contexts to support teachers' professional growth and success in the classroom. The discussion includes a graphic representation of multiple and embedded contexts of teaching. (LL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED342756

CRC

Center for Research on the Context of Secondary Teaching
School of Education, CERAS Building, Stanford University, Stanford, CA 94305-3084

UNDERSTANDING TEACHING IN CONTEXT

P92-142

Joan E. Talbert
Milbrey Wallin McLaughlin

Stanford University

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

SP033641

BEST COPY AVAILABLE

UNDERSTANDING TEACHING IN CONTEXT

P92-142

Joan E. Talbert
Milbrey Wallin McLaughlin

Stanford University

March 1992

This essay will appear as a chapter in David K. Cohen, Milbrey W. McLaughlin, & Joan E. Talbert, eds. Teaching for Understanding: Challenges for Practice, Research and Policy, San Francisco: Jossey-Bass Inc., Publishers, forthcoming. The research reported here was conducted for the Center for Research on the Context of Secondary School Teaching (CRC) with funding from the U.S. Department of Education Office of Educational Research and Improvement (Grant # G0087C0235).

UNDERSTANDING TEACHING IN CONTEXT[1]

Joan Talbert and Milbrey McLaughlin

INTRODUCTION

The question of how particular contexts of schooling affect educational outcomes has engaged social scientists for decades. For example, traditions of research in sociology and in psychology examine how student grouping and tracking practices affect learning and educational attainment; a long line of interdisciplinary work uses large-scale survey data sets to determine "school effects" on educational outcomes; and another, related line of research is devoted to isolating the features of effective schools. This broad research literature is framed by both scholarship in the social sciences and interest in improving educational policy and practice.

Four years ago the Center for Research on the Context of Secondary School Teaching (CRC)[2] embarked on the mission to integrate these disparate lines of work on teaching contexts and conduct new, multi-method research in order to provide a comprehensive look at what and how context conditions affect teaching and learning. A distinctive feature of our research is its bottom-up, teacher's-eye perspective on teaching within particular kinds of embedded contexts. This view of teaching and the contexts within which teachers work differs from that of researchers and policy makers who look at practice from the outside-in, considering teachers and their work within established frames of policy or social science paradigms. The

---

[1] Research for this paper was supported by funds from the U.S. Department of Education Office of Educational Research and Improvement (Grant No. G0087C0235) to the Center for Research on the Context of Secondary School Teaching (CRC), Stanford University. Any opinions, findings, and conclusions expressed here are those of the authors and do not necessarily reflect the views of the sponsoring agency. We are grateful to Julie Cummer for help preparing the chapter for publication, to CRC research colleagues for help collecting and analyzing the interview and survey data summarized in the chapter, to Brian Rowan and Richard Elmore for collaborating on the literature review for this chapter, and especially to the hundreds of teachers in California and Michigan high schools who contributed to our research.

[2] The CRC began its research program in October, 1987. Its study design integrates three years of field research in sixteen public and private high schools in two states and analyses of national survey data from the High School & Beyond and the NELS:88 Programs.

teachers' perspective makes all of these structures and relationships problematic; it considers teaching in terms of the daily communion of students, instruction, and dynamics of the school setting. A teacher's-eye view sees teaching as an integrating activity, intertwined and interdependent with students, subject matter, and features of the immediate workplace environment. Policy structures and guidelines move to the background as teacher's-eye view highlights relationships with students; constructs and variables popular with social scientists jumble together in the constantly changing, embedded context of school teaching, as teachers experience it.

Our Center's work aims to inform educators, administrators, and policy makers about levers for improving the conditions and quality of teaching; we intend to move from the teachers' perspective on teaching and school contexts to suggest principles and strategies for redesigning contexts to support teachers' professional growth and success in the classroom. We began our research program by reviewing the major lines of context-effects research in an effort to identify contexts salient to teachers and teaching. The meaning of "context" itself is problematic. Does context mean policy? parents? physical aspects of the school setting? community demographics? workplace history?

The list of candidates for inclusion in this broad concept encompasses so much as to be useless to policy and analysis. Consequently, our ongoing review of the literature and research with some 800 teachers in sixteen highly diverse high school settings addresses two broad questions in our effort to understand context in ways most meaningful to teachers:

- What <u>kinds</u> of contexts affect the content and conduct of classroom teaching?

- How do <u>conditions</u> in the various contexts of primary-secondary education and in the daily worklives of teachers in classrooms and schools affect their educational goals, conceptions of good teaching practice, and classroom instruction?

In addressing these issues, we have been concerned especially to trace implications of context variables for the particular kind of teaching called for by reformers, which we refer to as "teaching for understanding" (hereafter TFU).[3] The standards of TFU are principles for instruction, rather than a specific model or method that can be packaged and adopted by teachers. Key among the principles are: a) a conception of

---

[3] See the introduction to this book and references for discussion of the new standards for instruction. Here we only highlight key features of this form of practice.

knowledge as constructed by the learner and therefore situated in the context of prior knowledge, skills, values, and beliefs; b) a conception of teacher as guide, as co-constructor of students' knowledge; and c) a conception of the classroom as a community of learners, in which shared goals and standards, an atmosphere of mutual trust, and norms for behavior support students to take the risks and make the sustained efforts entailed in serious learning.(see chapters by Ball & Rundquist; Wilson, Miller & Yerkes; and Heaton & Lampert, in this volume).

This chapter retraces our journey through the research literatures concerned with context effects on educational outcomes.[4] Since these lines of research emphasize organizational contexts of teaching -- school systems and school cultures -- we began our review of the literature at these outer layers of teaching contexts and worked inward. Ironically, when we got to the core of the organizational context of teaching -- the classroom in which teacher, student, and subject matter intersect -- we found that we needed to extend our analytic lens well beyond the layers of school organization studied in traditional context-effects research. We came to see how the work of teachers and students in American classrooms is highly permeated by conditions in the broader institutional and social-cultural contexts of education.

Our foray through the context-effects literature touches on major lines of work and studies which have influenced the way researchers and policy makers think about and design context conditions to improve education. Along the way we puzzle over the meaning of research findings and make problematic conclusions from extant research. We illustrate ways in which the research findings fail to account for gross variation in educational outcomes, let alone differences in the kinds of teaching and learning going on in U.S. classrooms. For example, by trying to isolate a particular context variable's effect on educational outcomes, many studies have failed to appreciate the conditional

---

[4] The notion of "context effect" implies that conditions in a particular context -- its structures, policies, resources, values, beliefs, norms, routines and social relations -- influence how teachers think about and/or conduct instruction in their classroom and, in turn, how and what students learn. Since much of this research is quantitative, context conditions are generally thought of and specified as variables which describe differences among teaching settings, and their effects on variation in educational outcomes are estimated. We note, however, that conditions in American education that do not vary across settings can have powerful effects on teaching and learning, and the quantitative traditions of much of the context-effects research has meant that taken-for-granted, invariant conditions of teaching often remain unanalyzed.

and interactive nature of context effects on teaching. In making such standard research practice problematic, we help define the nature of policy research needed to enable TFU across the nation's classrooms.

Moreover, the context-effects studies -- some of which provide empirical grounding for particular school reform initiatives -- generally ignore the nature of teaching and learning. The quantitative studies of school effects on students' academic success have analyzed the kind of standardized test scores used by educational bureaucracies and indicted by some researchers for undermining educational success. Findings from this work may, ironically, isolate school context variables that predict success in routine modes of teaching and learning rather than those sought by current national educational standards.

While context-effect research has failed to appreciate differences in the nature of teaching and learning in classrooms, research on teaching has neglected the meaning of educational contexts for practice. Inattention to contexts of teaching becomes problematic not just for understanding how to promote change but for understanding and constructing TFU. The advances in learning theory, cognitive science and classroom research which support new teaching standards, portray this form of teaching as inherently situational and thus inextricable from the subject and student contexts of the classroom.[5] Whereas models of teaching of the "process-product" genre, and classroom research which examined them, effectively were context free, context matters fundamentally to conceptions of teaching which assume an active role for students and their teachers in the construction of knowledge.

Retracing our efforts to understand what and how contexts affect teaching, we begin with research on the organizational contexts of teaching and then move inward to the subject and student/classroom contexts. Each section peels away and examines

---

[5] see Greeno, J.G. (1991). Number sense as situated knowing in a conceptual domain. Research in Mathematics, 22, 170-218; Lampert, M. (1988). What can research on teacher education tell us about improving quality in mathematics education? Teacher and Teacher Education, 4 (2), 157-170; Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. Educational Researcher, 18 (1), 32-42; and Peterson, P. L., Fennema, E., & Carpenter, T. (1991). Using children's mathematical knowledge. In B. Means, C. Chelemer, & M. S. Knapp (Ed.), Models for teaching advanced skills to disadvantaged students (pp. 68-101). San Francisco, CA: Jossey-Bass.

another layer of teaching context -- to include, in order:

* educational sector and system
* school organization
* classroom

Following the course of our own journey to understand context effects on teaching, we then move from the classroom nexus of teacher, subject, and student outward to the broader social and institutional environments of primary and secondary teaching -- the taken-for-granted contexts and conditions of education that have powerful effects on what teachers can do to define and construct their professional practice. Finally, we take up the problem of how research can be better designed to inform policy about context effects on teaching generally and in particular about the nature of teaching for understanding and the conditions that enable or constrain this vision of practice.

SCHOOL CONTEXT EFFECTS ON TEACHING

School Sector and System Conditions

Differences in the educational success between public and private schools has been a central concern of school-effects research conducted over the past decade. Researchers and analysts have explored differences between sectors on such dimensions as governance, curriculum and instructional practice, accountability, funding arrangements, faculty autonomy, and material resources.[6]

A few highly publicized studies which used national survey data on school conditions and student test performance reached the conclusion that private schools do better than public schools, after other variables relevant to educational success are controlled.[7] Each study generated considerable debate on the adequacy of controls for confounded variables, adequacy of the tests for measuring student learning, and problems of

---

[6] Cohen, D.K., & Spillane, J.P. (1991). Policy and practice: The relations between governance and instruction. East Lansing: Michigan State University.

[7] see Chubb, J.E., & Moe, T.E. (1990). Politics, markets and America's schools. Washington, D.C.: The Brookings Institution; Coleman, J. S., & Hoffer, T. (1987). Public and private high schools: The impact of communities. New York: Basic Books; and Coleman, J. S., Hoffer, T., & Kilgore, S.D. (1982). High school achievement: Public, private, and catholic schools compared. New York: Basic Books.

comparing sectors as a basis for public education policy.[8] As with most context-effects research we have reviewed, these studies do not analyze or seriously discuss the nature of teaching and learning in sampled schools; indeed, teachers and teaching are absent from the studies, except as informants on school conditions. The research has been used to support policy initiatives to extend public funding to private schools.

The studies of sector effects have yielded various theories about which and how organizational conditions affect educational quality. Chubb and Moe[9], for example, extrapolate from their study's findings to conclude that institutions of democratic control generate bureaucratic controls in the public education sector that are inefficient and ineffective. In contrast, according to their argument, the market context of private schools establishes both quality control and responsiveness to parent and student clients because, the authors imply, parents and students know how to choose, evaluate, and regulate the quality of teaching in classrooms and schools. The realities of school contexts make this a questionable simplifying assumption in all but the most superficial terms.

The proposition that bureaucracy undermines educational success is prominent in a broader research literature concerned with organizational effects on educational quality, as well as in debates surrounding centralization initiatives such as national tests and curriculum. Of most interest, is the work specifically concerned with effects of bureaucracy, or increased centralized controls in American education, on teaching and learning.

A number of studies document ways in which bureaucratic controls brought about by recent educational reforms have

---

[8] for critiques of the early studies see: Sociology of Education, volume 55, (1982) and volume 56, (1983); Haertel, E.H., & Levin, H.M. (eds.)(1987). Comparing public and private schools: School achievement, Vol. 2, New York: Falmer Press; and James, T., & Levin, H.M. (eds.)(1988). Comparing public and private schools: Institutions and organizations, Vol. 1, New York: Falmer Press. See Glass, G. V. (1991). Are data enough? Educational Researcher, 20(3), 24-27, and Witte, J. F. (1990). Understanding high school achievement: After a decade of research, do we have any confident policy recommendations? (a paper presented at the annual meeting of the American Political Science Association San Francisco) for critiques of Chubb and Moe's recent study.

[9] Chubb, J. E., & Moe, T. E. (1990). Politics, markets and America's schools. Washington, DC: The Brookings Institution.

negatively affected teaching and learning.[10] These researchers argue that the work of teachers is becoming more routinized as state education agencies and local school systems increasingly implement standardized curricula and use standardized achievement tests to assess the performance of students, teachers, and schools. Since available texts and tests stress basic skills outcomes, teachers are pressured to use methods of "direct instruction" to teach to the objectives of minimum competency and basic skills achievement tests.[11] Consistent with the argument are test data over the past several years which show rising scores in basic skills areas but declining scores in writing, science, mathematical problem-solving, and analytic reasoning.[12]

In interviews with elementary teachers in Tennessee during the first year a state-wide minimum competency testing was implemented, Susan Rosenholtz[13] found evidence that teachers do in fact alter their instructional practices in response to these policies. She found that virtually all of the teachers interviewed altered the content of instruction to conform to the content of the tests. Similar findings were reported by Darling-Hammond and Wise[14] in their study of teachers' responses to district-wide testing systems. They found that standardized

---

[10] see, for example, Darling-Hammond, L., & Wise, A. C. (1985). Beyond standardization: State standards and school improvement. The Elementary School Journal, 85(3), 315-356; McNeil, L. (1983). Defensive teaching and classroom control. In M. Apple, & L. Weis (Ed.), Ideology and practice in schooling. (pp. 114-142). Philadelphia: Temple University Press; and McNeil, L. (1987). Exit, voice and community: Magnet teachers' responses to standardization. Educational Policy, 1(1), 93-113.

[11] for a review, see Rowan, B. (1990). Commitment and control: Alternative strategies for the organizational design of schools. In C. B. Cazden (Ed.), Review of Research in Education (vol. 16, pp. 353-389). Washington, D.C.: American Educational Research Association; also see Talbert, J. E., McLaughlin, M. W., & Rowan, B. (1992). Understanding context effects on secondary school teaching. Stanford University: Center for Research on the Context of Secondary School Teaching, for further discussion of the literature and arguments regarding bureaucracy in U.S. education.

[12] Darling-Hammond & Wise, 1985.

[13] Rosenholtz, S. J. (1987). Education reform strategies: Will they increase teacher commitment? American Journal of Education, 95(4), 534-562.

[14] Darling-Hammond & Wise, 1985.

testing altered the curriculum content and pacing of instruction and lead teachers to teach directly to the content of the tests. Studies of "competency-based" education provide additional evidence of the power of bureaucratic regulation to control teaching and learning. This form of instruction, with pre- and post-tests tightly linked to specified curricular objectives, prompts teachers to regard student learning as test results and to adopt fast-past teaching directly to the test.[15]

Clearly, the state and district levels of school organization are increasingly important contexts of teaching in U.S. public schools.[16] And many states have formulated policies and accountability systems that emphasize basic skills and routine, fact-oriented instruction -- controls compatible with traditional teaching practices.[17] However, a blanket condemnation of bureaucracy or centralization in education seems unwarranted on a number of grounds. First, the content of centralized educational policies and kinds of controls exercised are important variables unexamined by the studies we reviewed. California, for instance, has been developing state curriculum frameworks and assessments that embrace the new educational standards. Further, these new instructional standards and directives are being initiated through a "soft" control strategy -- incentives as opposed to mandates, accompanied by substantial resources and local programs to support teachers' professional development. Whether or not successful, centralization of this sort is designed to challenge the kinds of routine teaching that researchers have called the product of bureaucracies and to enable teachers' capacity for professional judgment that the researchers argue is squelched by bureaucracy.

Second, the concept of bureaucracy is richer theoretically than the researchers acknowledge, and dimensions or features of bureaucracy that can or do support teachers' professionalism and

---

[15] Darling-Hammond & Wise, 1985.

[16] cf. Cohen, D. K. (1990). Policy and practice: The classroom impact of state and federal education policy. Michigan State University: College of Education.

[17] As Cohen and Barnes note in the next chapter of this book, the back-to-basics movement of the 1980's was successful, in part, because it was consistent with traditional standards for teaching practice. It is not at all clear that instructional practices changed in qualitative ways under these policies, as some researchers have argued, even though teachers experienced pressure from bureaucratic regulation.

TFU are systematically ignored.[18] In this regard, the trend toward increased controls over teachers' subject and pedagogical content knowledge embraces a core principle of bureaucratic organization and a strategy, again, to enable teacher professionalism. While this strand of the current reform movement was initiated largely outside educational bureaucracies -- through, most notably, the Holmes Group[19]; the Carnegie Forum on Education and the Economy[20]; and the recently-established National Board for Professional Teaching Standards -- the strategy assumes that school systems will implement the professional controls in hiring practices and perhaps in their own evaluation systems.[21] By establishing standards for deeper knowledge of specific subjects, this kind of bureaucratization should make it more likely that teachers will be prepared for TFU.

Further, the argument explaining educational bureaucracy as an outgrowth of democratic control fundamentally misrepresents the different structures in which schools operate. Missing from these analyses is the important point that the more centralized systems in other countries--France, Japan, Australia as examples--are in fact much less bureaucraticized than ours. There is nothing inherent in central control that begets bureaucracy, even where national standards exist and are enforced rigorously.

Similarly, local school systems are not the homogeneous institution analysts such as Chubb and Moe[22] imply. The public sector embraces substantial diversity in form and function of

---

[18] Weber, M. (1947 trans.). The theory of social and economic organization. Glencoe, IL: Free Press. (first published in 1924).

[19] Holmes Group. (1990). Restructuring schools. San Francisco, CA: Jossey-Bass.

[20] Carnegie Forum on Education and the Economy. (1986). A nation prepared: Teachers for the twenty-first century. Carnegie Corporation.

[21] The Interstate Consortium for New Teacher Assessment and Support, founded four years ago by California and Connecticut with NGA funding and now housed with the CCSSO, is evidence that the new standards for teacher certification are being embraced and gradually adopted by state education authorities. The line between bureaucratic organization and professional control in education is blurry indeed; in fact, one could argue that bureaucracy is a necessary vehicle to enhance professionalism in teaching.

[22] Chubb & Moe, 1990.

schooling. Within America's school districts exist specialized schools, magnet schools, schools with innovative "house" structures, small schools and large schools. Democratic controls have not produced an undifferentiated public school bureaucracy. And the democratic controls to which Chubb and Moe refer differ themselves in their nature and influence within the public school system. For example, states with strong traditions of local control define little state presence in local school policies and procedures. In contrast, states like California and New York, with their elaborated state-level frameworks, examination schedules, and curricular standards, comprise significantly different contexts for local educational decision making. Differences in collective bargaining among states and districts is another feature that engenders fundamentally different forms of democratic control. Chubb and Moe, as do other analysts of this persuasion, ignore this complexity for purposes of analytic simplification. But in doing so, they model a reality that departs in important ways from the enterprise they aim to change.

Our review of this literature has been rather discouraging, in sum. Most discouraging is how quickly researchers have moved to simplify complex problems -- to isolate the offending variable, like bureaucracy -- and to reach simple solutions that go far beyond empirical evidence, like endorsing public support for parental choice of private education. The simplicity, we believe, is in large part a product of routines and standards for research. Not unlike standards for education that enforce transmission teaching, standards for research assume simple, straightforward answers to enormously complex questions. Called upon to reach such conclusions, policy researchers generally follow the norms of social science: they conduct studies in order to "isolate" effects of particular variables. This routine often mistakes statistical significance for substantive significance. Does the statistically significant one item difference in the reading scores of two groups really have substantive import? This research approach also inevitably leads to simple conclusions: X variable causes Y outcome, after all other relevant variables are controlled, enforcing this tendency to simplify complexity and move quickly to identify the problems and solutions in the "bullet" market for educational research -- decision-makers' demand for crisp "bulleted" implications for policy from a study or line of work. In reality, the ceteris paribus, or all other things being equal, assumptions of this line of research are at best problematic.

A related problem is that research traditions which place premium on quantification and on advancing theory prompt researchers to ignore the time and space- bound nature of their measures and findings. Abstractions of routine social science can mislead, especially when used within the highly diverse and changing context of U.S. education. For example, in our view, the effect of bureaucratization on teaching is highly conditional: it depends fundamentally on the nature of centralized policies and

on the interaction of the policies with other context variables, such as local standards and norms for teaching, relevant resources, and a school's professional community.[23] Conclusions from this line of research are much too decontextualized to be of value in identifying levers to influence teaching generally or in designing contexts that promote TFU. The salience of a particular context, or a particular variable, depends on the context in which it is embedded.

Internal Organization of Schools

Another line of research concerned with context effects on teaching and learning focuses on the internal organization of schools. This work, often called "effective schools" research, has sought to isolate organization conditions that promote school success.[24] As with other research reviewed thus far, the effective schools studies rely upon traditional, standardized achievement tests to measures school success and thus their findings are not useful in understanding what and how school conditions can shape different kinds of teaching and learning. Further, this line of work venerates the school as the focus and unit of analysis for studying how workplace structures and cultures affect teachers and teaching -- thus ignoring internal contours of organization and teachers' professional communities. This tendency is consistent with the top-down bias of context-effects research, in which the administrative structure of the system defines the important layers of organization for research and policy: this line of research is devoted to the smallest unit of schooling that has an administrator. Ironically, this line of research seems to assume that, beyond the administrator, there are no remaining implementors of policy or practice.

Nevertheless, the effective schools research is useful in drawing attention to the culture of the school workplace as a critical feature of the context of teaching and learning. Regardless of what's being learned, students and teachers are much more engaged in schoolwork when staff members share educational goals, when the principal provides teachers resources and encouragement to improve their teaching, when teachers

---

[23] For example, we find that public school teachers vary substantially between high schools and departments within schools in their perceptions of bureaucratic controls within the same state and district policy systems. The differences are substantially a matter of principal leadership and the extent to which the department or school function as a professional community.

[24] see Purkey, S. C., & Smith, M. S. (1983). Effective schools: A review. Elementary School Journal, (83), 427-454, for review and discussion of this tradition.

collaborate and share in developing practice, and when teachers and students relate to one another as persons outside the classroom context.[25]

This line of argument suggests that a strong, school-wide community is needed to engage teachers and students in the enterprise of education. It posits school community as an important condition of educational success and has supported a substantial effective-schools reform movement over the past few years.[26] However, as we note, connections between this organization variable and particular forms of teaching and learning in classrooms is highly problematic. Widespread district and school participation in effective schools programs to generate more communal forms of organization, or increased specialization among school missions in large urban districts to generate greater client commitment, are reform strategies likely to yield uneven effects on teaching for understanding in U.S. classrooms.

We end up disappointed with this line of research, as well, as guide to constructing environments to enable TFU or even as a help in understanding better the important contexts of teaching. Again, the research and conclusions are too simple and therefore can mislead as well as lead. First, the contingencies involved in both constructing a school-wide community and establishing this norm of educational practice are not analyzed. For example, our research suggests that strong school-wide communities are rare indeed among public high schools. The capacity for such community to develop seems to depend importantly upon size / scale or a very special, encompassing school mission; the research conclusions thus may apply more to elementary than secondary school teaching contexts.

---

[25] in addition to Purkey & Smith, 1983, see Bryk, A., & Driscoll, M. E. (1988). An empirical investigation of the school as community. University of Chicago: School of Education; McLaughlin, M. W. & Talbert, J. E., with Kahne, J., & Powell, J. (1990). Constructing a personalized school environment (P90-115). Stanford University: Center for Research on the Context of Secondary School Teaching; Newmann, F. M. (1990). Higher-order thinking in teaching social studies: A rationale for the assessment of classroom thoughtfulness. Journal of Curriculum Studies, 89, 541-554; and Rutter, M., Maughan, B., Mortimore, P., Outson, J., & Smith, A. (1979). Fifteen thousand hours: Secondary schools and their effects on children. Cambridge: Harvard University Press.

[26] U.S. General Accounting Office. (1989). Effective schools programs: Their extent and characteristics (GAO/HRD-89-132BR).

Even under such rare conditions where distinctive school communities are found -- in special mission secondary schools, such as the performing arts magnet in the CRC sample; in private schools, such as our academically selective girls school and our school for students unsuccessful in traditional school settings; and in elementary schools with strong principals -- value consensus may have nothing to do with the new standards for TFU or may even reinforce traditional teaching standards. This line of research and argument fails to consider the various kinds of school communities that can develop under different circumstances. For example, the immediate environment of public schools -- populations served, curriculum policies, teacher assignment practices -- might make the construction of a school community very different from one public school to another.[27]

In the typical high school of about 1200 students, the high school department is a primary organizational context of teaching. As indicated by measures of teacher collegiality, the extent of collaboration and support among teachers in the typical high school varies substantially across high school departments in the same school.[28] Thus, departments can more or less approximate a community of colleagues and more or less suppose members' capacity for effective practice, sense of professional efficacy and commitment. Whether or not a strong department community supports teacher learning and practice of TFU is yet another question and needed complication for this line of research. Most surely, teachers need to be linked themselves or through colleagues to the wider discourse community in which TFU standards are understood and promoted.

---

[27] see McLaughlin, M. W. (1990). Strategic dimensions of teachers' workplace context (P90-119). Stanford University: Center for Research on the Context of Secondary School Teaching, and Talbert, J. E., Eaton, M., Ennis, M., Fletcher, S., & Tsai, C. S. (1990). Goal diversity among U.S. high schools: Trade-offs with academic excellence (R90-2). Stanford University: Center for Research on the Context of Secondary School Teaching for evidence of diverse educational cultures among U.S. high schools; see Anyon, J. (1981). Social class and school knowledge. Curriculum Inquiry, (11), 3-41, for evidence of diverse instructional cultures among elementary schools.

[28] in Talbert, J. E. (1991). Boundaries of teachers' professional communities in U.S. high schools (P91-130). Stanford University: Center for Research on the Context of Secondary School Teaching, department-specific scores on a collegiality index replicated from a national survey revealed that four out of eight regular public schools in the CRC sample had departments scoring in both the top and the bottom quartiles of a national distribution of school averages on the index.

Moreover, we are finding that the collegial and social-normative context of secondary-level teachers, and their opportunities to learn new teaching practices, extend beyond the boundaries of school staffs. We see, in particular, the pivotal role that professional networks can play in teachers' interest and capacity to learn new forms of teaching. For example, large and growing subject area networks such as the Urban Math Collaborative and the Bay Area Writing Project have been pivotal in the professional growth of large numbers of high school mathematics and English teachers, respectively. Teachers participating in these networks see them as critical contexts of their work and professional development.[29] Also, as evidenced by the chapters in this book, university-school collaboratives -- as well as district subject specialists who participate in TFU discourse communities -- play a similar role in promoting improved teaching practice among elementary school teachers. While the existence of such extra-school contexts of teachers' professional communities does not challenge the importance of the school context in supporting teachers' success, it may be that professional networks and discourse communities outside the school are more important than, or at least an influential complement to, school-based community for diffusing and enabling TFU in American classrooms. As our data show, the subject area department is also likely to be a key context for high school teachers, in that subject colleagues can be important in sustaining and engendering enthusiasm for subject and commitment to courses and classes on a day-to-day basis. By exalting the school community as the normative context of teaching, this line of research misses both more proximate and distant boundaries of teachers' professional communities that can fundamentally frame teaching practice.

Class/ Student Context of Teaching

The class-level organization of elementary and secondary school teaching differs radically, with implications for the meaning of class assignment and composition for practice. School organizing norms usually keep elementary school students and teachers together for most subjects and hours of the day and divide secondary school students' and teachers' days into time periods, usually about an hour in length, devoted to particular subjects/courses and classes of students. Lines of research on the class context of primary and secondary teaching are quite disparate and offer very different perspectives on how the class

---

[29] Lichtenstein, G., McLaughlin, M., & Knudsen, J. (1991). Teacher empowerment and professional knowledge. Stanford: Stanford University and Lieberman, A., & McLaughlin, M. (forthcoming). Networks for educational change: Powerful and problematic. Phi Delta Kappan.

context, and particularly student composition, affects teaching practice. We only touch on each in this chapter.

A major line of research concerned with class-level effects in secondary schooling analyzes the educational consequences of student tracking, a common though not highly institutionalized practice in U.S. secondary schools.[30] Research on tracking is a long-standing tradition in the sociology of education and stratification[31] and only recently has examined teaching and learning processes across tracked high school classes.[32]

In contrast, most research on classroom instruction has been conducted by psychologists aiming to improve the design of instruction in primary and secondary school classrooms. Since findings of such research could represent an important context for teachers' judgments about classroom practice, we need to consider their messages to teachers. The key issue for us in reviewing these disparate literatures has been: what class variables influence teachers' judgements about best practice and/or the likelihood of TFU? We begin by considering observations from educational psychology on different learners' needs and move to the sociological analyses of classroom teaching.

What differences in students' learning needs might prompt teachers to adapt goals and practices to particular classes of students? On one hand, there is evidence that direct instruction in cognitive processes and knowledge structures can be more effective than indirect methods of teaching for lower ability

---

[30] Garet, M., & DeLany, B. (1988). Students, courses, and stratification. Sociology of Education, 61, 661-677, for evidence of the messiness of high schools' tracking practices.

[31] cf. Alexander, K. L., Cook, M. A., & McDill, E. L. (1978). Curriculum tracking and educational stratification. American Sociological Review, 43, 47-66; Hallinan, M. T. (1990). The effects of ability grouping in secondary schools: A response to Slavin's best-evidence synthesis. Review of Educational Research, (60), 501-504; Jencks, C. S., Smith, M., Acland, H., Bane, M. J., Cohen, D., Gintis, H., Heyns, B., & Michelson, S. (1972). Inequality: A reassessment of the effect of family and schooling in America. New York: Basic Books; and Rosenbaum, J. E. (1976). Making inequality. New York: Wiley.

[32] cf. Hallinan, 1990; Gamoran, A. (1986). Instructional and institutional effects of ability grouping. Sociology of Education, (59), 185-198; Gamoran, A. (1987). The stratification of high school. Sociology of Education, (60), 135-155; and Oakes, J. (1985). Keeping track: How schools structure inequality. New Haven: Yale University Press.

students.[33] There is also evidence that heterogeneous grouping is conducive to learning among both high and low ability students, or at least that homogeneous grouping is not preferable.[34] Thus if teachers were following closely the research evidence, they might adapt instruction to individuals within a class, by providing scaffolding for low-achieving students, but would not be highly influenced by class composition in defining instructional goals.

Quite apart from student ability is the issue of students' exposure to particular facts and skills in a subject area and how this might shape instructional choices. In particular, might teachers not reject TFU goals and practices because students haven't mastered the basics? Educational psychology is much less ambivalent on this issue. Cognitive psychologists have challenged the sequential view of learning that places simple facts and basic skills prior to problem solving and complex understanding. In fact, research suggests that "basic" and "higher order" instructional tasks each have their own inherent demands and that mastery of one type of task does not necessarily lead to proficiency on the other type of task.[35] Moreover, proponents

---

[33] cf. Cronbach, L. J., & Snow, R. E. (1977). Aptitudes and instructional methods: A handbook for research on interactions. New York: Irvington; Doyle, W. (1983). Academic work. Review of Educational Research, 53(2), 159-199; and Snow, R. E. (1989). Aptitude-treatment interaction as a framework for research on learning and individual differences. In P. L. Ackerman (Ed.), Learning and individual differences. New York: Freeman. One explanation for this effect is that lower ability students and novices in a particular subject area lack general command of the independent learning skills and strategies needed to formulate their own solutions to tasks presented under conditions of indirect instruction.

[34] see Slavin, R. E. (1990). Achievement effects of ability grouping in secondary schools: A best-evidence synthesis. Review of Educational Research, (60), 471-500, for extensive review of this literature.

[35] see Becker, W. C., & Gerstein, R. (1982). A follow-up of follow through: The later effects of the direct instruction model on children in fifth and sixth grades. American Educational Research Journal, (19), 75-92; Brown, A., & Campione, J. (1977). Memory strategies in learning: Training children to study strategically (Tech. Rep. No. 22). University of Illinois, Urbana: Center for the Study of Reading; Brown, A. L., & Campione, J. C. (1980). Inducing flexible thinking: Problem of access (Tech. Rep. No. 156). University of Illinois, Urbana: Center for the Study of Reading; Greeno, J. G. (1991). Mathematical and scientific thinking in classrooms and other

of teaching for understanding argue that this instructional goal is equally appropriate for high- and low-achieving students. Research demonstrates that low-ability students can master higher-level knowledge structures and strategies if teachers adapt to include more direct instruction.[36]

Nevertheless, research in high schools indicates that teachers often hold the view that low-achieving students are "behind" and need to catch up before going on to the material and skills being mastered by high achieving peers.[37] Field and ethnographic studies comparing high and low track classes document that instruction in low-track classes emphasizes rote memory and highly structured assignments, while in higher-track classes more emphasis is placed on complex tasks that require analytic thinking.[38] These findings appear to derive from two sources: teachers' adaptations to students with different

---

situations. In D. Halpern (Ed.), Enhancement of higher-order thinking in science and mathematics education. Hillsdale: Lawrence Erlbaum Associates; Greeno, J. G., Smith, D. R., & Moore, J. L. (1991). Transfer of situated learning. In D. Detterman, & R. Sternberg (Ed.), Transfer on trial. Hillsdale: Lawrence Erlbaum Associates; and Mayer, R.E. & Greeno, J.G. (1972). Structural differences between learning outcomes produced by different instructional methods. Journal of Educational Psychology, (63), 165-173.

[36] see Brown & Campione, 1977; Carnine, D. W., & Stein, M. (1981). Strategy and organizational practice procedures for teaching basic facts. Journal for Research in Mathematics Education, 12, 65-69; Hansen, J. (1981). The effects of inference framing and practice on young children's reading comprehension. Reading Research Quarterly, (16), 391-417; Lloyd, J. (1980). Academic instruction and cognitive behavior modification: The need for attack strategy training. Exceptional Education Quarterly, (1), 53-63; Rubin, A. (1980). Making stories, making sense (Reading Education Rep. 14). Urbana: Center for the Study of Reading, University of Illinois; and Scardamalia, M., Bereiter, C., & Woodruff, E. (1982). Functional and stylistic choices in computer-assisted instruction. American Educational Research Association.

[37] see Oakes, 1985; Rosenbaum, 1976; and Wilson, D., & Schmits, P. (1978). What's new in ability grouping? Phi Delta Kappan, 59, 535-536.

[38] see Hargreaves, D. H. (1967). Social relations in a secondary school. London: C. Tinling and Company Limited; Metz, M. H. (1978). Classrooms and corridors: The crisis of authority in desegregated secondary schools. Berkeley: University of California Press; and Oakes, 1985.

achievement and motivation levels[39] and/or the knowledge and beliefs of teachers assigned to different classes.

Assorted evidence on patterns of teacher assignment to tracked high school classes suggests that teachers of low track classes might be relatively weaker in subject matter and/or pedagogical content knowledge than their higher-track counterparts, and that these differences in teachers' technical knowledge, rather than differences among students, may account for the differences in teaching practices across tracks in high schools.

The notion that most capable teachers are assigned to high versus low track classes comes from evidence that most teachers prefer high or average classes, that teachers compete to avoid low-track classes, and that teachers' track assignment is regarded as a sign of their relative competence.[40] On average, teachers prefer highly motivated students in high-track classes or cooperative students in general-track classes to disinterested or defiant students in low-track classes. Additional data consistent with this argument indicates that teachers assigned to low-track classes have more limited access to professional support and development opportunities than do their colleagues.[41]

Research on classroom teaching suggests that student composition may be a powerful context for high school teaching but much less so for elementary school teaching, at least as

---

[39] Metz, 1978, pp.103-106, observed rationales for teachers' emphasis on simplified and slow-paced instruction for low-track classes which focused entirely on student motivation. Some teachers regarded this instructional approach as a way to maintain classroom order, especially because routine work often kept unruly students busy. Some said that routine work responded to students' preferences for undemanding and private work.

[40] see Finley, M. K. (1984). Teachers and tracking in a comprehensive high school. Sociology of Education, (57), 233-243, and Rosenbaum, 1976 for evidence in U.S. schools; see Ball, S. J. (1981). Beachside comprehensive: A case-study of secondary schooling. Cambridge: Cambridge University Press; Burgess, R. G. (1983). Experiencing comprehensive education: A study of Bishop McGregor School. London: Methuen and Co.; Hargreaves, 1967; and Lacey, C. (1970). Hightown Grammar. Manchester: Manchester University Press for data from British schools.

[41] see Finley, 1984, and Talbert, J. E. (1990). Teacher tracking: Exacerbating inequalities in the high school. (P90-121). Stanford University: Center for Research on the Context of Secondary School Teaching.

distinct from the school and community context. On average, tracking of high school classes yields different educational goals across tracked classes and a lower tendency for teachers to embrace TFU standards in their low-track classes, particularly in mathematics and science.[42] And, insofar as TFU is committed to constructing knowledge within a community of diverse learners, homogeneous grouping which classifies students on the basis of performance standards is inconsistent with the principles of TFU. Nevertheless, detracking and heterogeneous grouping is not likely to promote TFU either unless teachers are able to successfully challenge the operation of academic status characteristics in the classroom[43] so that the level of trust is sufficient for the development of a community of learners.

This line of work has gone farther than others to specify qualitative differences in educational outcomes of teaching and to assess the effects of student context, on average, on teachers' goals and practices. However, as both scholarship and policy research it falls short of understanding more than the crudest level of effects and policy levers. We do not understand from this research why high school teachers have lower academic expectations for low-achieving students, understanding essential to designing policies or programs to change expectations and practice. Our interviews with teachers over the past few years suggest that their adaptations to low-achieving, nontraditional high school students vary substantially -- from maintaining strict standards and failing most students, to lowering academic standards and supporting students as persons, to adapting practice to meet student needs within high academic

---

[42] Raudenbush, S. W., Rowan, B., & Cheong, Y. F. (forthcoming). Teaching for higher-order thinking in secondary schools: Effects of curriculum, teacher preparation, and school organization. Stanford University: Center for Research on the Context of Secondary School Teaching.

[43] cf. Rosenholtz, S. J. (1984). Treating problems of academic status. In J. Berger, & M. Zelditch (Ed.), Studies in expectation states theory. San Francisco: Jossey-Bass; Rosenholtz, S. J., & Simpson, C. (1984). The formation of ability conceptions: Developmental trend or social construction? Review of Educational Research, 54, 31-63; and Webb, N., & Kenderski, C. M. (1983). Student interaction and learning in small-group and whole-class settings. In P. L. Peterson, L. C. Wildinson, & M. Hallinan (Ed.), The social context of instruction: Group organization and group processes. San Diego: Academic Press.

standards.[44] The last adaptation is rare and should be the critical focus of policy research aiming to improve practice.

In short, while tracking research reveals that, on average, teachers set goals and practices for their classes according to the students' prior academic achievement and motivation, it does not explain this tendency nor the important deviations from the pattern. The research evidence does not, in our view, warrant the conclusion that detracking, for example -- a local policy strategy based on the evidence reviewed -- will improve the educational experiences of low-achieving high school students. The intervention is likely to have a range of unanticipated consequences and highly variable effects on teaching and learning across classrooms and schools. Extrapolating from such main-effects findings to policy is highly risky when mechanisms and divergent patterns are not understood.

Finally, these lines of research take a much narrower view of the student context of teaching than do teachers and thus miss important ways in which students frame teaching practice. Indeed, students are the most salient and powerful context of teaching. Students' needs, as teachers perceive them, and the constraints and opportunities they present for instructional choices shape teachers' goals, conceptions of practice, and roles in myriad ways.[45] In the next section we broaden our lens to include the some of the features of student context neglected in the context-effects research traditions.

BROADER SOCIAL AND INSTITUTIONAL CONTEXTS OF TEACHING

Largely ignored in these literatures are the broader social and institutional contexts of teaching that permeate each layer of the school organization context. The closer we have come to understanding how high school teachers frame their instructional goals and tasks, the more we see the power of contexts outside school administrative boundaries to shape teachers' judgments about practice. Here we highlight a few such contexts that seem to matter a great deal to teachers and teaching and that can overshadow, or interact with, the organization variables analyzed in the major lines of research.

---

[44] McLaughlin, M. W., Talbert, J. E., & Phelan, P. (1990). 1990 CRC report to field sites. Stanford University: Center for Research on the Context of Secondary School Teaching.

[45] McLaughlin, M. W. (forthcoming). What matters most in teachers' workplace context. In J. W. Little, & M. W. McLaughlin (Ed.), Teachers, communities, and contexts. New York: Teachers College Press.

Institutional Routines and Controls from Higher Education

A consistent finding of research in high schools is that the kind of teaching called for by new standards is highly rare, even among high-track secondary-level classes; several researchers call attention to the routine character of teaching in high school classrooms.[46] Their description of schooling -- as highly institutionalized, watered-down subject matter curricula and routine, transmission-oriented pedagogy -- challenges researchers to examine conditions that constrain teaching for understanding in most contexts. Put differently, we need to analyze the contexts and conditions that reinforce this teaching tradition. This understanding seems indispensable to formulating strategies to enable TFU.

Interviews with teachers and observations of classes in numerous high schools prompt us and other field researchers before us to conclude that many educators conceive their work as fundamentally a matter of "implementing texts." Teachers can engage in major battles over the selection of texts for a course or subject; the text has become, to a significant degree, the locus for control over the content of subject matter and pedagogy and the focus of professional debate over such matters.[47] The conception of teaching as text implementation is not simply a matter of tradition, of individuals' routines, or of public school bureaucracy, as analysts have alternately posited. Rather, it is supported by standards in the institutional environment of primary-secondary education.

Dominant standards for teaching and learning in higher education are consistent with the "text-delivery" model of

---

[46] see Goodlad, J. I. (1984). A place called school. New York: McGraw-Hill; McNeil, L. M. (1986). Contradictions of control: School structure and school knowledge. New York: Routledge & Kegan Paul; Oakes, 1985; and Powell, A., Farrar, E., & Cohen, D. (1985). The shopping mall high school. Boston: Houghton Mifflin.

[47] The power of curricular materials to constrain teaching and thus to engender significant professional struggles among teachers has surfaced in our research. In one CRC school, the foreign language department split into two warring factions over approaches and preferable texts for language learning. Likewise, physics teachers in a district came to blows over decisions on text adoption, pitting texts consistent with a transmission model of subject instruction against one more consistent with TFU. [The latter lost, by the way.] Decisions about the goals and content of instruction are framed significantly by text publishers' sense of demand and by administrators' or teacher committees' preferences for alternative instructional approaches.

education and thus, on the whole, constrain instructional choices among teachers at lower levels of the system. Teaching practices, particularly in high schools, need to be understood in the broader context of U.S. schooling. While teachers, parents, and students aiming for higher education may regard critical thinking, analytic tasks, and problem-solving as important,[48] their concerns over access to preferred colleges and preparation for success in terms of college grading standards may bolster traditional transmission standards for teaching and learning. Since college entrance exams and advance placement tests emphasize coverage of course topics,[49] they press teachers of college-oriented high school students to embrace a transmission-oriented pedagogy.[50]

One might note, however, that higher education institutions are highly diverse in terms of their specific expectations for students' roles and learning. Thus they differ as well in the nature of explicit and tacit controls they exert on primary-secondary education. A substantial literature on the cultures of higher education institutions[51] reveals qualitative differences in their institutional mandates for primary-secondary education. We know, for example, that large state universities, ivy league colleges, and small liberal arts colleges each have rather different expectations for students' and teachers' roles and success standards. Yet this kind of diversity is largely at the margins, and most students who go on to college will be taught in large, lecture classes and evaluated according to how well they master facts and knowledge transmitted. The teachers in our typical high schools and even college-preparatory private schools see their mission as preparing students to do well in such typical college contexts.[52]

---

[48] Hargreaves, 1967 and Oakes, 1985.

[49] Burgess, 1983 and Oakes, 1985.

[50] Although teachers in the academically-selective girls school in our field sample were most articulate about this constraint on TFU, teachers of high-track classes in public schools also complained of pressure to cover content tested on AP exams.

[51] cf. Clark, B. R. (1970). The distinctive college: Antioch, Reed, and Swarthmore. Chicago: Aldine, and Clark, B. R. (1983). The higher education system. Berkeley: University of California Press.

[52] A social studies teacher in a typical California high school, for example, proudly described a "good class session" as one in which all the students are taking notes in good outline form. This, he saw, would be a critical skill for their success

Our interviews with high school teachers in a wide variety of educational contexts have taught us about the power of perceived student needs for success in college to define high school teaching standards. And with rare exceptions, higher education institutions place a premium on students' mastery of facts and reproduction of transmitted knowledge as the definition and measure of learning. These criteria of educational success are signalled and supported by college admissions standards, scale of classes and pedagogical norms, and student assessment practices common among higher education institutions. The success of any initiative for reform of primary-secondary education will, in our view, be heavily conditioned by standards enforced in higher education. Reform in this context thus may be a key lever for advancing TFU in primary-secondary education.

Social class and peer cultures

Another key context of teaching and learning is students', parents', and teachers' perceptions of the value and nature of education. These understandings apparently vary substantially by social class cultures and shape "tastes" for particular educational goals and classroom teaching strategies. For example, in a study of fifth grade instruction in five schools serving families of different occupational strata, Jean Anyon[53] found substantial differences between the schools in parents' and teachers' views about how to prepare children for later schooling and life. In schools serving students from middle and working class backgrounds, teachers emphasized knowledge as "received," whereas instruction in a school serving students from professional families prized creativity, and instruction in a school serving the executive elite stressed analysis of classic materials and scientific reasoning.

This research suggests that social-cultural differences in parents' and teachers' expectations for students' educational and occupational futures can substantially influence preferred content and strategies of teaching. The fact that such differences appeared as early as the fifth grade in Anyon's study suggests that community social class is a powerful context of teachers' content-pedagogical choices. Indeed, Anyon's evidence suggests that few parents and teachers in most working and middle class communities would choose teaching for understanding.[54]

---

in their [large lecture] college classes.

[53] Anyon, 1981.

[54] see also Hemmings, A., & Metz, M. H. (1990). Real teaching: How high school teachers negotiate societal, local community, and student pressures when they define their work. In

The role played by parents' social class and educational values in shaping teachers' choices of instructional content and pedagogy should receive much more attention by researchers and policy makers, in our view. Particularly when increased parental choice is a major direction of education policy, we need to know better how this might play out in terms of the new teaching standards. The evidence on social class "tastes" for education suggests that a specialized market for TFU may already exist among professional families, but that teachers will be constrained from learning and practicing TFU in the majority of schools of choice. This proposition suggests that an important role of policy aiming to promote the new teaching standards will be to generate a demand for this form of teaching by educating the public on the benefits and means of deeper student understanding of subject matter.

The peer culture of schools, particularly at the secondary level, is also a powerful context of teaching that can manifest in myriad ways in teachers' judgments about practice. This context is often thought of in organization terms, as "student discipline" or as "school order." However, as with other context conditions we have discussed, the quantitative conception of student culture misses the substance of its meaning for teachers and students and therefore its effect on teaching practice. A serious analysis of the contours and variations of student context is beyond the scope of this essay. But, suffice it to say, the substance of student cultures is a critical context for teachers who spend their days interacting with students who draw their sense of identity and frame their involvements in terms of peer relationships quite apart from their academic capacities. This domain of context has been largely ignored in the literature and we only illustrate its facets and ways it shapes teaching.

One key facet of student culture crucial to teaching is norms about class attendance. One way of thinking about this variable is in terms of school attendance policy; another way is in terms of family and peer values regarding attendance and the value of school, more generally. We have seen in our research that attendance mandates do not create the same classroom ambiance as does a peer culture that supports class attendance

---

R. Page, & L. Valli (Ed.), Curriculum differentiation (pp. 91-111). Albany: State University of New York Press; Metz, M. H. (1990). How social class differences shape teachers' work. In M. McLaughlin, J. E. Talbert, & N. Bascia (Ed.), The contexts of teaching in secondary schools (pp. 40-107). New York: Teachers College Press; and Metz, M. H. (1991). Real school: A universal drama amid disparate experience. In D. Mitchell, & M. Goertz (Ed.), Education politics for the new century: The twentieth anniversary yearbook of the politics of education association. Philadelphia: Falmer Press.

and that, in either case, high school students and teachers co-construct the meaning of attending a particular class. At the extreme end, student disengagement and high rates of class-cutting seriously constrain teachers' instructional choices, especially in a subject like mathematics which assumes linear progress. In schools where neither student culture nor administrative policy enforce class attendance, teachers need to devote considerable attention and energy to developing a class culture conducive to student commitment.

Changes in student culture represent an historical context of teaching salient to large proportions of the faculties of most CRC urban schools. Teachers in all CRC sites, including an elite academic independent school, complain that today's students simply do not read as much or as broadly as did students in the past. As a consequence, students bring less to the classroom in terms of understandings and knowledge, and they also are less willing to complete lengthy reading assignments. A theme common to our interviews with teachers of English and social studies was the shrinking reading list and reduced expectations for students' out-of-classroom work.

Teachers in all school settings also say that today's students are distracted by non-school demands to a degree that significantly affects their classroom practices. Teens from all social classes hold after-school jobs, for reasons of economic necessity or interest in keeping at the front of the adolescent fashion parade. Students from families stressed by financial concerns, by insufficient child care or other domestic supports, find themselves assuming roles and responsibilities filled in previous generations of students by the nuclear or the extended family. In fact, "changed family circumstances" was the explanation offered with greatest force and frequency by teachers in urban secondary schools for the inadequate attention, insufficient interest and engagement they observe in many today's students. These changed family circumstances are compounded for many students by the daily pressures of community violence, gangs, drugs, or other threats to their well-being.

These conditions of today's students have fundamental consequences on teachers' decisions about what and how to teach. In many classrooms, homework undone leads to homework no longer assigned. Teachers, in sum, talk not about generic "teaching" when they discuss their conceptions of practice. They reference the values, interests, competencies and energy students bring into a particular classroom and the implications of these student characteristics for their teaching. And their responses to similar student characteristics varies within and between schools. In some settings, apparent student indifference begets teachers' indifference or frustration and teachers' decisions either to "just flunk them" or "dumb down" the curriculum to make it easy for everyone. In others, it precipitates teacher or

faculty reconsideration of practice in ways that promote teaching for understanding.[55] Teachers' responses are largely a product of the norms of practice and nature of their up-close context, or salient professional community.[56]

Subject matter cultures

In many ways subject matter frames the work of teachers, particularly in secondary schools where teachers' preparation and assignment are likely to be in a single subject, and thus represents a powerful context of teaching. As we have mentioned already, subject area departments are important workplaces for high school teachers and can become strong professional communities that support teacher learning. However, apart from defining boundaries for high school units, subject matter is a powerful context for teaching in both elementary and secondary classrooms. We mention a few ways in which subject matter defines teaching contexts which can constrain or enable TFU:

- as traditions of content and pedagogy -- the "stuff" of teaching,
- as domains of educational policies and politics and, thus, mediators of centralization effects, and
- as loci for discourse communities.

In our interviews and surveys of high school teachers over the past three years, we have observed subject differences in conceptions of knowledge and pedagogy that have important implications for TFU. For example, mathematics teachers are more likely than teachers of other academic subjects to see their subject matter as "given," learning as "hierarchical," and their day-to-day teaching as routine. Both CRC and national survey data show that math teachers feel they have less control over the content of their classes. Further, they are less likely (and English teachers are more likely) than their colleagues to place high priority on students' personal growth as an educational goal. In short, common conceptions of subject matter, student learning, and pedagogy among mathematics teachers may generally constrain the choice and practice of TFU in this subject context.

---

[55] McLaughlin, Talbert, and Phelan, 1990.

[56] McLaughlin, M. W. (1990). Strategic dimensions of teachers' workplace context (P90-119). Stanford University: Center for Research on the Context of Secondary School Teaching, and Talbert, J. (forthcoming). Constructing a school-wide professional community: The negotiated order of a performing arts school. In J. W. Little, & M. W. McLaughlin (Ed.), Teachers' cultures and contexts. New York: Teachers College Press.

Further, subject areas are differentially affected, both directly and indirectly, by the development of centralized educational policies. For instance, state and district reforms of student graduation requirements during the 1980's have shifted emphasis toward math and science and, indirectly, away from vocational education and other elective subjects. We have seen a variety of subject-specific effects of this shift, among them: more tracking of math and science classes, declines in vocational education courses, and assignment of out-of-subject teachers to (low-track) math classes.[57] In addition, state and district curriculum frameworks are specified for subject areas and thus their existence or not, their content, and their effects on teaching are entirely mediated by the subject context. For example, mathematics teaching at primary and secondary levels may be highly regulated in a district but social science teaching may be entirely controlled by teachers. District curriculum experts and instructional support staff also are defined along subject lines; and the quality of professional support provided in a particular district can be highly variable by subject. The fact that subjects are important media for policy effects and for teachers' instructional support makes them strategic contexts for analyzing policy and system effects on teaching.

Finally, subject areas represent important contexts for the development of discourse communities within which TFU, or other forms of teaching, can be defined and sustained. The ongoing collaborations between university researchers and primary school teachers that are the subject of previous chapters are constructed in the context of subject matter. Indeed, this is the most vital context for developing professional communities capable of enabling and sustaining TFU, given the focal point of subject matter in this form of practice. Just as students and teachers construct subject matter in TFU classes, teachers construct together the meaning of teaching in the context of specific subject matter and classes, like how to guide the learning of longitude and latitude. We regard subject matter as a critical context -- as source and substance -- for discourse communities capable of diffusing, realizing, and enforcing the new teaching standards.

---

[57] This effect is especially apparent in comparisons between CRC schools in California and Michigan. In the latter state, where state educational reform has been slower and less ambitious, the demand for subjects has been relatively stable in recent years and we have not seen the mass reassignment of teachers out of vocational and other subjects into math and science.

EMBEDDED CONTEXTS OF TEACHING

Our journey through the literature and three years of research with teachers in highly diverse settings has led us to a view of teaching as permeated by multiple layers of context, each of which has the capacity to significantly shape educational practice. We conclude that the important contexts of teaching are much more varied, embedded and interactive in their effects on teaching practice than assumed by relevant lines of research. The schema summarizes the kinds of multiple and embedded educational contexts which, together, shape teaching goals and practices in secondary and elementary schools.

[SEE FIGURE 1]

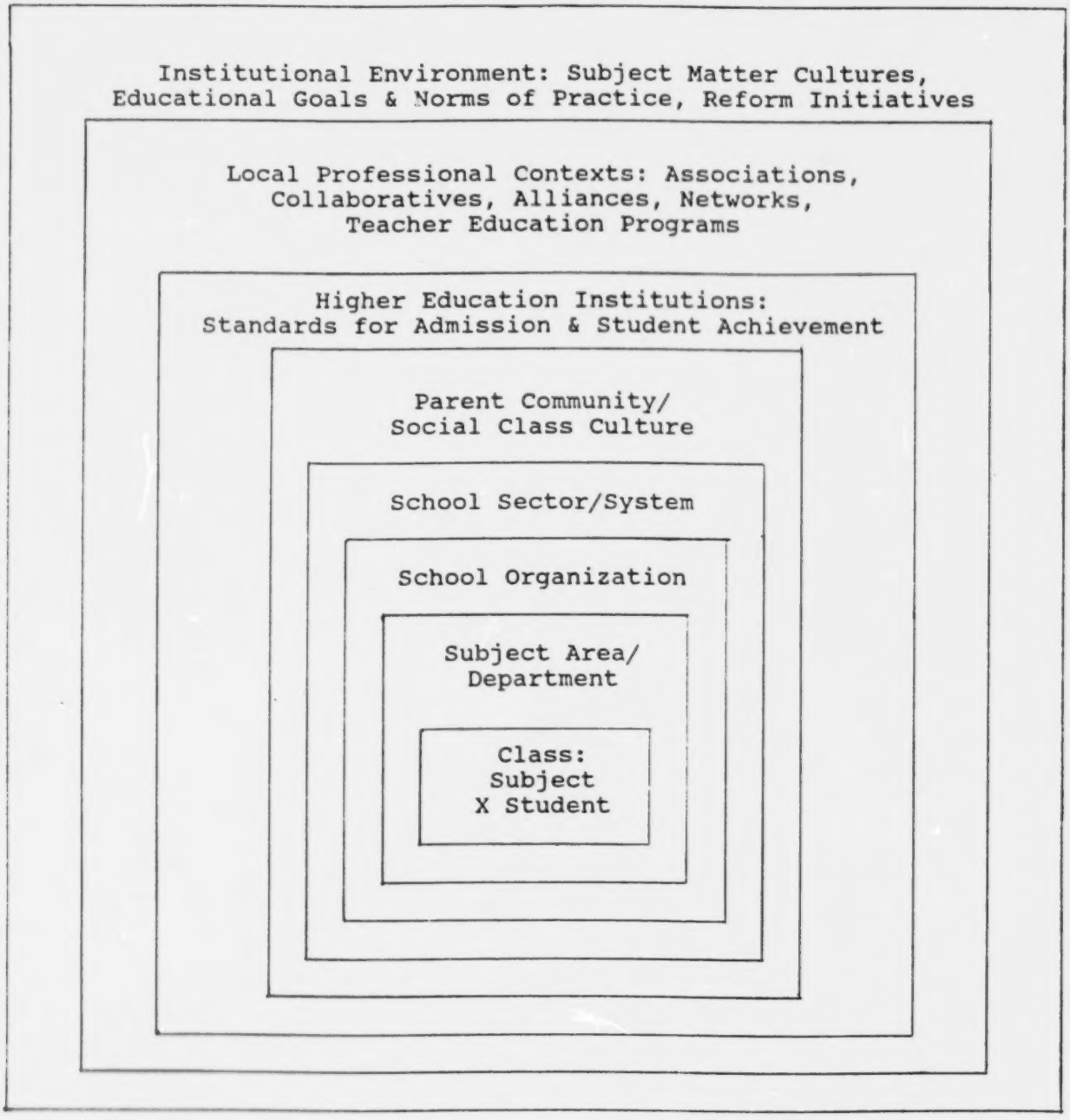
Because our research systematically pursued the perspective of classroom teachers, rather than hypotheses derived from the discipline-framed research, we were able to isolate factors previously neglected by prior research. Our bottom-up strategy of analysis revealed the salience and power for teachers of taken-for-granted contexts, such as success standards in higher education, and taught us limits of social science research routines for understanding context effects on teaching.

The teacher's-eye view allowed us to see multiple contexts of teaching simultaneously -- as a symphony or cacophony of directives toward any particular goals and standards for teaching. By designing our research to capture important contrasts and commonalities across teaching contexts -- systematically varying school sector and state policy, district resources, school mission and student composition -- we were able to see the interplay of multiple contexts in teachers' day-to-day worklives and conceptions of practice. Through the multiple lens provided by teachers in distinctly different classes, subjects, departments, schools, districts and states and with different levels and kinds of professional ties outside the job, we came to see that context conditions are highly interactive in their effects on teaching practice.

The main-effects findings of context-effects research fail to specify conditions under which an average effect is observed and can thus misrepresent context effects and mislead policy. The average effect of a context variable may, for example, conceal radically different effects within different (embedded) contexts. For example, a CRC analysis of school context effects on teacher community using HS&B national survey data revealed opposite effects of school and district size in suburban and urban school

FIGURE 1

MULTIPLE AND EMBEDDED CONTEXTS OF TEACHING


Institutional Environment: Subject Matter Cultures, Educational Goals & Norms of Practice, Reform Initiatives
Local Professional Contexts: Associations, Collaboratives, Alliances, Networks, Teacher Education Programs
Higher Education Institutions: Standards for Admission & Student Achievement
Parent Community/ Social Class Culture
School Sector/System
School Organization
Subject Area/ Department
Class: Subject X Student

contexts.[58] In a study of teachers' instructional objectives, Raudenbush, Rowan, and Chaing[59] found that math teachers are much more likely to adjust their instruction to students' prior achievement, with less emphasis on TFU in low-level classes, than are English and social studies teachers (subject x class/student interaction). Further, we find that teachers in strong, collegial departments are less likely than their colleagues in weak departments to view low-achieving students as problematic and more likely to maintain strong commitment to teaching, even to reject traditional teaching methods in favor of TFU in enable students' success (department x class/student interaction). In short, understanding context effects on teaching requires a view of the conditional nature of any context effect and of the multiple contexts that combine and interact to influence teaching practice.[60]

Put differently, the salience or power of one or another context variable in affecting a teacher's instructional goals and practices depends upon conditions in which it is embedded. Extending the earlier example, the power of a strong department or a principal leader to affect teaching may be much greater in a school or class setting in which students are not succeeding under traditional education routines. To understand teaching in context is to understand the interplay of the multiple, embedded contexts of education in the daily lives of teachers.

IMPLICATIONS FOR POLICY RESEARCH

The centrality of context to teachers' conception of their work, to the development of classroom practices, to TFU together with the limits of "average effects" findings for formulating policy suggest several implications for policy research.

---

[58] Hannaway, J., & Talbert, J. E. (1991). Bringing context into effective schools research: Urban-suburban differences (P91-137). Stanford University: Center for Research on the Context of Secondary School Teaching.

[59] Raudenbush, Rowan, and Cheong, forthcoming.

[60] See Ragin, C. C. (1987). The comparative method: Moving beyond qualitative and quantitative strategies. Berkeley: University of California Press, for systematic discussion of differences between variable-based and case-based strategies of research and theory-development. The latter approach, relatively rare in the social sciences, examines effects of coincident context conditions on outcomes of interest and promises to be more fruitful for formulating teaching policy than traditional research assumptions and methods.

First, refined conceptions and measures of context variables that correspond with teachers' realities and that matter to TFU are needed to provide valid representations of conditions of teaching and their effects on educational outcomes. As illustrated for the school community and bureaucratization variables, qualitative differences are as important as quantitative variation in specifying context conditions. Field-based understandings of diverse meanings and manifestations of a particular context variable such as faculty goal consensus will be essential in meeting this challenge.

Second, policy researchers need to think strategically about the contributions and limits of survey research and field-based research. In the past, policy research has focused too much (and sometimes mistakenly) on estimating average effects of particular variables across widely diverse settings and too little on examining and understanding the conditions and processes whereby the multiple contexts of teaching influence teaching and learning for better or worse.

Survey research, with refined measures of both outcomes and context conditions, can provide important information on the distributions of key teaching and learning variables and their context correlates in particular historical periods. Further, breakdowns of large survey samples into particular kinds of settings, such as subject contexts of teachers or metro-status of schools, can be helpful in assessing conditional relations. In addition, we have found that survey data on school and department culture, leadership, educational goals and processes is useful for developing summary institutional "profiles" of secondary schools that depict diversity in educational environments and suggest strategic differences and similarities among schools with common clientele, goals, or management issues. And, by linking such case profiles to national survey measures of teaching conditions, it is possible to further locate field sites in relation to national distributions and norms.

Field-based research can provide important interpretative analysis and identify why and how diverse aspects of school context influence teaching and learning. Research of this order provides critical complement and explanation to survey findings. Field-based research attends to such context-specific factors as school culture, management structures, governance, and to the ways in which broader influences such as state or local curriculum policies, policies concerning student assignment and promotion, or shifts in the broader political economy work through and within the school context to shape classroom activities and outcomes.

These important questions are beyond the reach of survey methods and essential to policy makers' and practitioners' understanding of context effects on teaching. For example, case

studies of classrooms, teachers, schools and school systems are needed to obtain evidence on the co-occurrence of, and complex interactions among, context conditions that support or undermine particular educational outcomes such as teaching for understanding. Qualitative, field-based research can reveal the processes of change necessary to understanding which and how context conditions enable or constrain teachers' learning and practice of teaching for understanding. Qualitative research can illuminate the everyday meanings of context that are most salient to teachers as they construct practice in particular educational settings.

The importance of context to practice also underscores the potential of policy research to help policy makers and practitioners to gain a better conception of what teaching for understanding in fact is, and to learn about the conditions that enable or constrain it. While many policy makers acknowledge the value of teaching for understanding and the need to develop higher order thinking skills for students,[61] they also struggle with what these notions mean in practice and the ways in which policy can support them. Policy research that provides contextualized understanding and interpretation can contribute to policy makers' understanding of how this form of education is learned and adopted by teachers and students and begin to identify levers for change.

Likewise for practitioners, policy research which attends to context can support efforts to rethink or reform practice. Practitioners benefitted little from policy studies which presented only aggregate statistics and decontextualized summary findings. Teachers and administrators learn best from the experience of other practitioners or opportunities to understand practice in context.[62] Field-based studies of teaching for understanding in context can facilitate practitioners' learning about alternatives to existing practices, about differences between TFU and traditional forms of instruction, and understanding of how such practices might be carried out in their own settings.

However, to fulfill this potential, policy research itself must be sensitive to context. Most lines of research on promising practice or on school effects have ignored those contexts that teachers say are most critical to their practices and beliefs--subject area and students. Research needs to address the ways in

---

[61] see America 2000, An educational strategy to move the American educational system ahead to meet the needs of the 21st century. Washington, D.C.: Federal Government, for example.

[62] Shedd, J. B., & Bacharach, S. B. (1991). Tangled hierarchies. San Francisco: Jossey-Bass: 70 ff.

which TFU is constructed of and in context. We are coming to see, for example, how teaching for understanding in English departs in some elemental ways from TFU in mathematics.[63] And the challenges and substance of TFU in classes filled with academically motivated and successful students are quite different from those in classes where student mobility is high, where English skills are limited, or where academic motivation is low. Teaching does not take place in generic classrooms stripped of subject matter concerns or mindless of the backgrounds, needs, and interests of the students who comprise a class. Teachers need to understand alternatives to existing practices not just in context generally, but in contexts specific to their schools and classrooms.

Similarly, both teachers and administrators ask for evidence that new practices "can work here," and concrete information about how to transform their practices in ways that are consistent with teaching and learning for understanding. Policy research carried out in "boutique" schools with special resources or advantages, as opposed to "typical" or difficult school settings, does little to convince educators that the promising practices or reforms reported they can be implemented or will "work" in their settings. Likewise, policy research which focuses on outcomes but fail to describe and interpret the processes of transformation--how the teachers and administrators under study were able to change their practices and accomplish the positive outcomes reported--gives practitioners little explicit help in planning their own changes or confidence that they could in fact "get there from here."

In the absence of such information, practitioners' decisions to stick with known practice are understandable. Yet without support from policy research that attends to specific salient contexts, the kinds of learning assumed by teaching for understanding are attenuated or confined to settings where practitioners are able to observe TFU directly. Policy research thus can play a strategic role in supporting systemic change in practice by describing, interpreting and broadcasting contextualized examples of the teaching and learning activities reformers pursue.

Without strategies to describe, analyze and circulate contextualized examples effective practices, it is likely that many policy makers and practitioners still "won't get it," and

---

[63] see Grossman, P. L. (forthcoming). English as context: English in context. In M. W. McLaughlin, J. Knudsen, & J. Talbert (Ed.), Content as context, and Stodolsky, S. S. (forthcoming). A framework for subject matter comparisons in high schools. In M. W. McLaughlin, J. Knudsen, & J. E. Talbert (Ed.), Content as context.

efforts at reform will continue to produce islands of excellence while most classrooms, schools and districts continue with the questionably effective but familiar strategies of the past.

To be most useful, policy research also must attend to the embedded character of the multiple contexts that shape practice and educational outcomes. As our discussion highlights, the attitudes and practices of actors in any one level of the system--classroom, school, district, as examples--are conditioned by the activities and attitudes of actors in other parts of the system. Policy research that takes a systemic perspective can help identify the different levers and resources available in different parts of the system, and they ways in which they can work together to enable teaching for understanding (or, conversely, the ways in which actions in one component of the system constrain actors in other system segments).

Finally, research which informs policies to support more productive learning environments--teaching for understanding--can exploit the necessarily indirect relationship between policy and practice that long has frustrated reformers.[64] Policies work through and within the contexts in which they are carried out[65]; policy research, by extension, could aim to understand and influence those contexts as a way to influence practice. Policy research of this stripe moves away from sole focus on questions of "what works" or efforts to influence policy directly to examine aspects of the contexts of practice that constrain or enable desired policy outcomes, or in this case, teaching for understanding.

---

[64] Cohen, D. K. (1988). Teaching practice, plus que ca change... In P. W. Jackson (Ed.), Contributing to educational change. (pp. 27-84). Berkeley: McCutchan Publishing Corporation.

[65] McLaughlin, M. (1987). Learning from experience: Lessons from policy implementation. Educational Evaluation and Policy Analysis, 9, 171-178; Fullan, M. (1990). The new meaning of educational change. New York: Teachers College Press.